

DOCKET NO: 294829US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
HIDENORI YOSHIDA, ET AL. : EXAMINER: WELTER, RACHAEL E  
SERIAL NO: 10/589,396 :  
FILED: AUGUST 15, 2006 : GROUP ART UNIT: 1611  
FOR: COMPOSITION FOR :  
TOOTHBRUSHING :

DECLARATION UNDER 37 C.F.R. §1.132

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Now comes Hidenori Yoshida who deposes and declares that:

1. I am a graduate of Mashiko senior high school and received my associate degree in the year 1986.
2. I have been employed by the 1986 for the past 24 years, as a researcher in the field of Research and Development.
3. The following experiments were conducted by me or under my direct supervision and control.

Toothpaste compositions were prepared as described in table 1 below allowing for variations in the surfactant and silica granules as detailed in table 2. The foaming quality

and quantity was analyzed using the techniques reported in example 15 of the specification of U.S. 10/589,396.

Table 1

	Examples
Silicic anhydride	18.50
Powder cellulose (average particle size: about 50 $\mu\text{m}$ )	0.50
Polyethylene glycol (PEG600)	5.00
Silicic anhydride granules (average particle size: 100-2,000 $\mu\text{m}$ )	2.5-25 wt. %
Sodium lauryl sulfate	0.2-4.5 wt. %
Xanthan gum	0.40
Carrageenan	0.60
Concentrated glycerin	20.00
Sorbitol (sorbitol solution)	30.00
Saccharin sodium	0.15
Sodium fluoride	0.20
DL-Malic acid	2.00
pH Regulator	Amount to adjust pH to 6.0
Flavor	1.40
Purified water	Balance
Total	100

Table 2

	surfactant	Silica granules	Foam volume <sup>a</sup>	Texture of Foam	Wateriness of Foam	Viscosity of Foam	Foaming Property
1	Sodium lauryl sulfate 1.5 wt. %	2.5 wt. % 100 $\mu\text{m}$	65	7	6	4	4
2	Sodium lauryl sulfate 1.5 wt. %	2.5 wt. % 400 $\mu\text{m}$	60	4	5	4	6
3	Sodium lauryl sulfate 0.2 wt. %	2.5 wt. % 200 $\mu\text{m}$	58	3	5	3	4
4	PEO(200)PPO(40)block copolymer type nonionic surfactant (HLB 16) 4.5 wt. %	2.5 wt. % 200 $\mu\text{m}$	58	4	6	3	6
6	Sodium lauryl sulfate 1.5 wt. %	25.0 wt. % 200 $\mu\text{m}$	63	6	7	5	6

7	Acyl amino acid salt 1.5 wt. %	2.5 wt. % 200 $\mu$ m	57	4	5	3	4
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<sup>a</sup> mL of foam after 1 minute

I declare under penalty of perjury under the laws of the United States of America  
that the foregoing is believed to be true and correct. 28 USC 1746(1)

Yoshinori Yoshida  
Date December 8, 2010